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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/309,264	05/11/1999	YUKIJI YODA	P7292-9003	7284

7590 03/11/2004

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EXAMINER

JAGAN, MIRELLYS

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/309,264	Applicant(s) YODA ET AL.	
	Examiner Mirellys Jagan	Art Unit 2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2-6-04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments, filed 2/6/04, with respect to the rejection(s) of claim(s) 3-8 and 11-12 under 35 U.S.C. 1203(a) over Osburn et al in view of Matsumiya et al and Plath et al have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Osburn and U.S. Patent 5,996,239 to Ohnheiser. Accordingly, the finality of the last Office action has been withdrawn.

Claim Objections

2. Claims 3-12 are objected to because of the following informalities:

Claims 3, 5, and 12 state that the tool of the machining tool is moved to the work. This is not clear since the specification discloses that the work is moved toward the tool of the machining tool in order for the tool to contact the work, i.e., the tool of the machining tool does not move toward the work.

Claim 10 is not clearly written since it is not clear what the phrases "a signal of informing a change movement completion" and "a signal of informing a coordinate-measuring means refuge completion" are referring to.

Claims 3, 4, 6, and 11 are objected to for being dependent on an objected base claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-7, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 3,825,245 to Osburn et al [hereinafter Osburn] in view of U.S. Patent 5,291,662 to Matsumiya et al [hereinafter Matsumiya].

Osburn discloses a machining tool comprising a tool (40) for machining a workpiece that is placed on a pallet (30). The pallet forms part of an automatic pallet changer that horizontally moves the pallet from a waiting position to a working position located at an inlet of the machining tool next to the tool (40) so that the tool may be used to machine the workpiece. The machining tool has rotating means (27) for pivoting the workpiece to a measuring position. After the workpiece has been machined, it is then moved back into the working position (see figure 1).

Osburn does not disclose the machining tool further comprising a coordinate-measuring machine arranged in the vicinity of the machining tool, wherein the coordinate-measuring machine has a probe that is brought close the workpiece after the workpiece has been machined and relocated to the working position for measuring the workpiece; the tool of the machining tool and the probe are moved toward the workpiece in a horizontal direction and in a direction orthogonal to each other; and the coordinate-measuring machine having refuge means and being capable of taking refuge in a linear motion to a position in which the coordinate-measuring machine does not prevent the workpiece from moving.

Matsumiya discloses a machining tool for machining a workpiece. A coordinate-measuring machine is arranged in the vicinity of the machining tool at a location where the machined workpiece is placed. The coordinate-measuring machine has a probe that is brought close the workpiece to measure the workpiece after the workpiece has been machined. The probe is movable in three directions, and is moved horizontally and vertically toward a measurement surface of the workpiece. The coordinate-measuring machine has refuge means (wheels) and is capable of taking refuge in a linear motion, i.e., is moveable along a straight line, to a position away from the machining tool so that it does not prevent the workpiece from moving. Matsumiya teaches that it is beneficial to provide a machining tool with a coordinate-measuring machine in order to measure the shape of the machined workpiece in real time and prevent the production of inferior goods (see figure 14; and column 14, lines 33-48).

Referring to claims 3, 5, and 12, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the machining tool disclosed by Osburn by adding a coordinate-measuring machine adjacent to the machining tool to measure the workpiece after it has been machined, as taught by Matsumiya, in order to measure the shape of the workpiece in real time and prevent the production of inferior goods. Furthermore, in the machining tool disclosed by Osburn and Matsumiya, the workpiece will inherently move toward the tool in a direction (horizontal) orthogonal to the direction (vertical) of the probe.

Further referring to claim 3, in utilizing the machining tool disclosed by Osburn and Matsumiya, the workpiece will move toward the tool in a direction (horizontal) orthogonal to the direction (vertical) of the probe, and the method steps of claims 3 and 4 will inherently be followed.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Osburn and Matsumiya, as applied to claims 3-7, 11, and 12 above, and further in view of U.S. Patent 5,996,239 to Ohnheiser.

Osburn and Matsumiya disclose a machining tool having all of the limitations of claim 8, as stated above in paragraph 4, except for the coordinate-measuring machine taking refuge with a rotational motion.

Ohnheiser discloses a machining tool for machining a workpiece. A coordinate-measuring machine is arranged in the vicinity of the machining tool and has a probe that is brought close the workpiece to measure the workpiece after the workpiece has been machined. The probe is movable in three directions, and is moved horizontally and vertically toward a measurement surface of the workpiece. The coordinate-measuring machine has refuge means (hinges) and is capable of taking refuge with a rotational motion to a position away from the machining tool so that it does not prevent the workpiece from moving. Ohnheiser teaches that it is beneficial to pivotally connect the coordinate measuring machine to the machining tool in order to properly position the coordinate measuring machine relative to the workpiece (see figure 1; column 2, lines 13-52; column 3, lines 41-54; and column 6, lines 3-10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the machining tool disclosed by Osburn and Matsumiya by pivotally connecting the coordinate-measuring machine to the machining tool, as taught by Ohnheiser, in order to properly position the coordinate measuring machine relative to the workpiece.

6. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osburn and Matsumiya, as applied to claims 3-7, 11, and 12 above, and further in view of U.S. Patent 4,473,883 to Yoshida et al [hereinafter Yoshida].

Osburn and Matsumiya disclose a machining tool having all of the limitations of claims 9 and 10, as stated above in paragraph 4, except for the machining tool and the coordinate-measuring means mutually exchanging a measurement enabling and a measurement completion signal, both signals being related to the movement of the workpiece by the changer; wherein the coordinate-measuring means leaves a refuge position after having received a signal from the machining tool, and the changer starts moving the workpiece after having received a signal informing refuge completion.

Yoshida discloses a machining tool for machining a workpiece. The machining tool includes a pallet changer for moving a pallet into a machining position and a measuring position. A coordinate-measuring machine (MUNT) is arranged to measure the workpiece in the measuring position after the workpiece has been machined. The coordinate-measuring machine and the machining tool are connected to each other such that they exchange a measurement enabling and a measurement completion signal, both signals being related to the movement of the workpiece by the changer; wherein the coordinate-measuring means leaves a refuge (non-measuring) position and enters a measurement position to measure the workpiece after having received a signal from the machining tool, and the changer starts moving the workpiece after having received a signal indicating that the coordinate-measuring means has reentered the refuge (non-measuring) position. Yoshida teaches that connecting the coordinate-measuring machine

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and the machining tool in such a manner automates the loading of the workpiece to and from the machining tool after a measurement is obtained (see figure 14; column 24; lines 24-40).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the machining tool disclosed by Osburn and Matsumiya by connecting the coordinate-measuring machine to the machining tool, as taught by Ohnheiser, in order to automate the loading of the workpiece to and from the machining tool after a measurement is obtained.

Response to Arguments

7. Applicant's arguments with respect to claims 3-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents disclose coordinate measuring machines:

U.S. Patent 5,134,782 to Breyer et al

U.S. Patent 6,625,894 to Kovach et al

U.S. Patent 3,823,482 to Schiller

U.S. patent 6,519,860 to Bieg et al


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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 571-272-2247. The examiner can normally be reached on Monday-Thursday from 8AM to 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
March 1, 2004



Diego Gutierrez
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